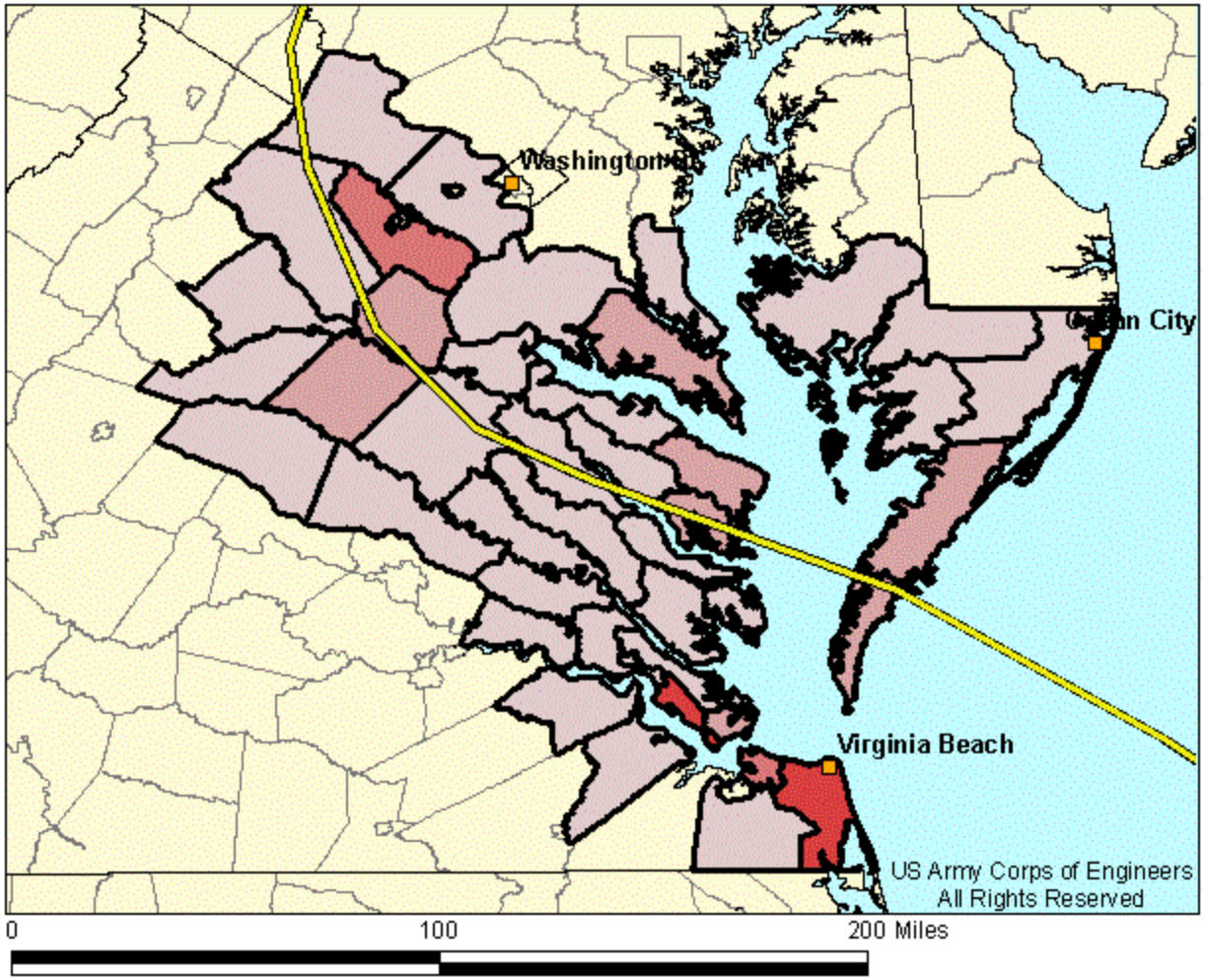
US Army Corps of Engineers

Hurricane Dean 1983 Debris Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

Virginia - 4,124,000 Yards
Maryland - 400,000 Yards

Model results per County on following page

This model is based on a Category 2 storm making landfall near Exmore, VA.

Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 2 storm making landfall near Exmore, VA. These projections are based on information from the NHC (1330 EDT 05/14/2008) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane dean 1983 Debris Model

Generated By:
Siemsen, LRL 1400 EDT 05/14/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Dean 1983 Debris Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Maryland		Calvert	43,000
		Charles	64,000
		Dorchester	3,000
		Somerset	49,000
		St Mary's	188,000
		Wicomico	20,000
		Worcester	33,000
Maryland	400,000		
Virginia		Accomack	250,000
		Caroline	66,000
		Charles City	2,000
		Chesapeake city	2,000
		Culpeper	3,000
		Essex	61,000
		Fairfax	< 1,000
		Fauquier	62,000
		Fredericksburg city	59,000
		Gloucester	98,000
		Hampton City	217,000
		Hanover	31,000
		Isle Of Wight	< 1,000
		James City	79,000
		King And Queen	25,000
		King George	52,000
		King William	33,000
		Lancaster	112,000
		Loudoun	4,000
		Louisa	< 1,000
		Manassas City	36,000
		Mathews	54,000

State	Yards per State	County	Yards per County
Virginia		Middlesex	88,000
(continued)		New Kent	21,000
		Newport News city	759,000
		Norfolk City	277,000
		Northampton	103,000
		Northumberland	136,000
		Orange	8,000
		Poquoson City	28,000
		Prince William	280,000
		Richmond	61,000
		Spotsylvania	192,000
		Stafford	220,000
		Surry	< 1,000
		Virginia Beach city	530,000
		Westmoreland	63,000
		Williamsburg city	14,000
		York	98,000
Virginia	4,124,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane dean 1983 Debris Model

Generated By:
Siemsen, LRL 1400 EDT 05/14/2008

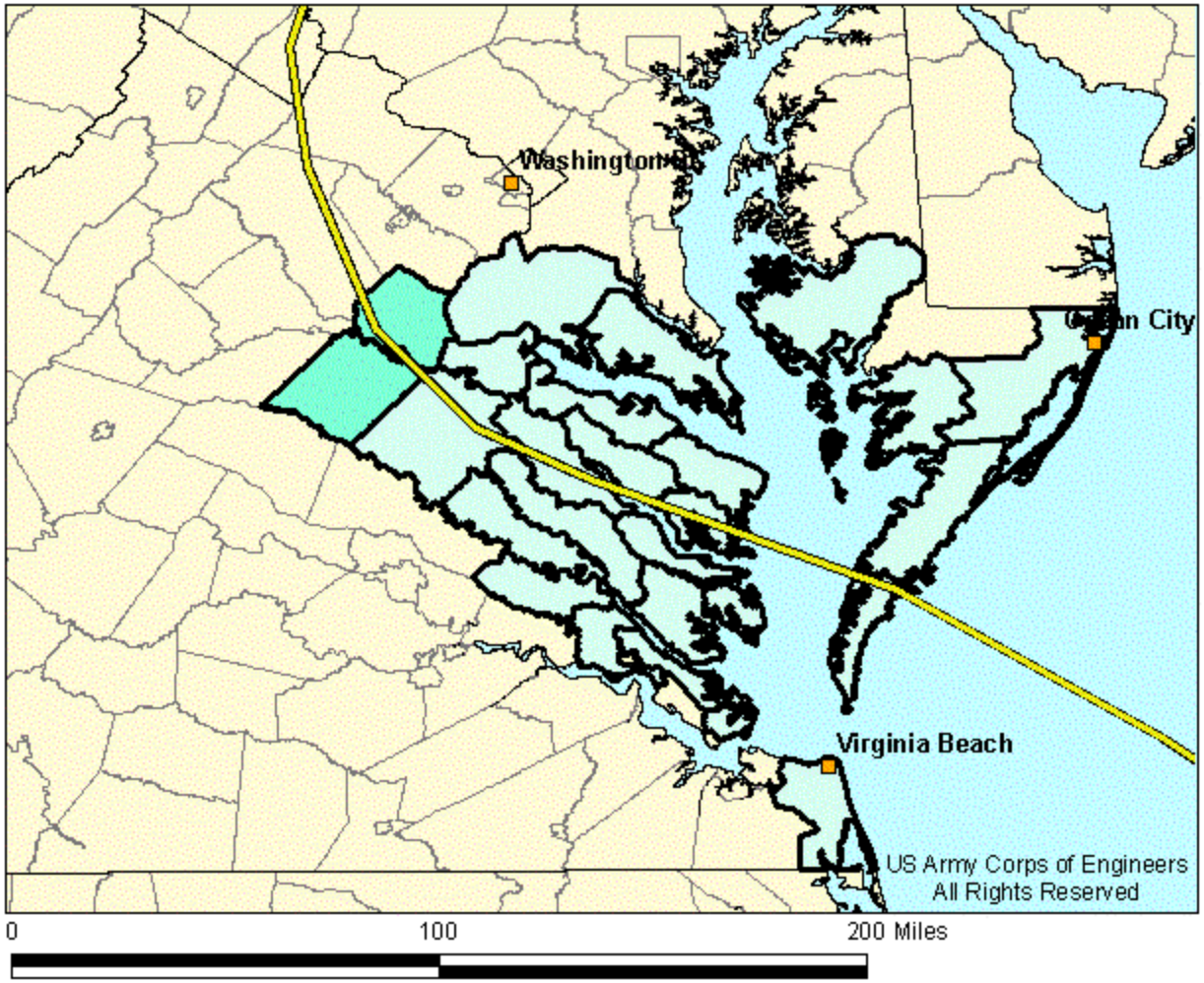
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Dean 1983 Commodities Model

Landfall Plus About 12 Hours

US Army Corps of Engineers

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three
VA – 10/20/41 Truckloads
MD – 3/5/9 Truckloads

Model results per County on following page

This model is based on a Category 2 storm making landfall near Exmore, VA.

Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 2 storm making landfall near Exmore, VA. These projections are based on information from the NHC ***(1330 EDT 05/14/2008)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane dean 1983 Commodities Model	
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Sources: HURREVAC LRL-DEBRIS	Page 3 of 12

US Army Corps of Engineers

Hurricane Dean 1983 Commodities Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
Maryland		Charles	1
		Dorchester	1
		Somerset	2
		St Mary's	4
		Worcester	1
Maryland	9		
Virginia		Accomack	3
		Caroline	1
		Essex	1
		Fredericksburg city	2
		Gloucester	3
		Hampton City	2
		James City	1
		King And Queen	1
		King George	2
		King William	1
		Lancaster	1
		Mathews	1
		Middlesex	1
		New Kent	1
		Northampton	1
		Northumberland	1
		Poquoson City	1
		Richmond	1
		Spotsylvania	5
		Stafford	6
		Virginia Beach city	1
		Westmoreland	2
		York	2
Virginia	41		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane dean 1983 Commodities Model

Generated By:
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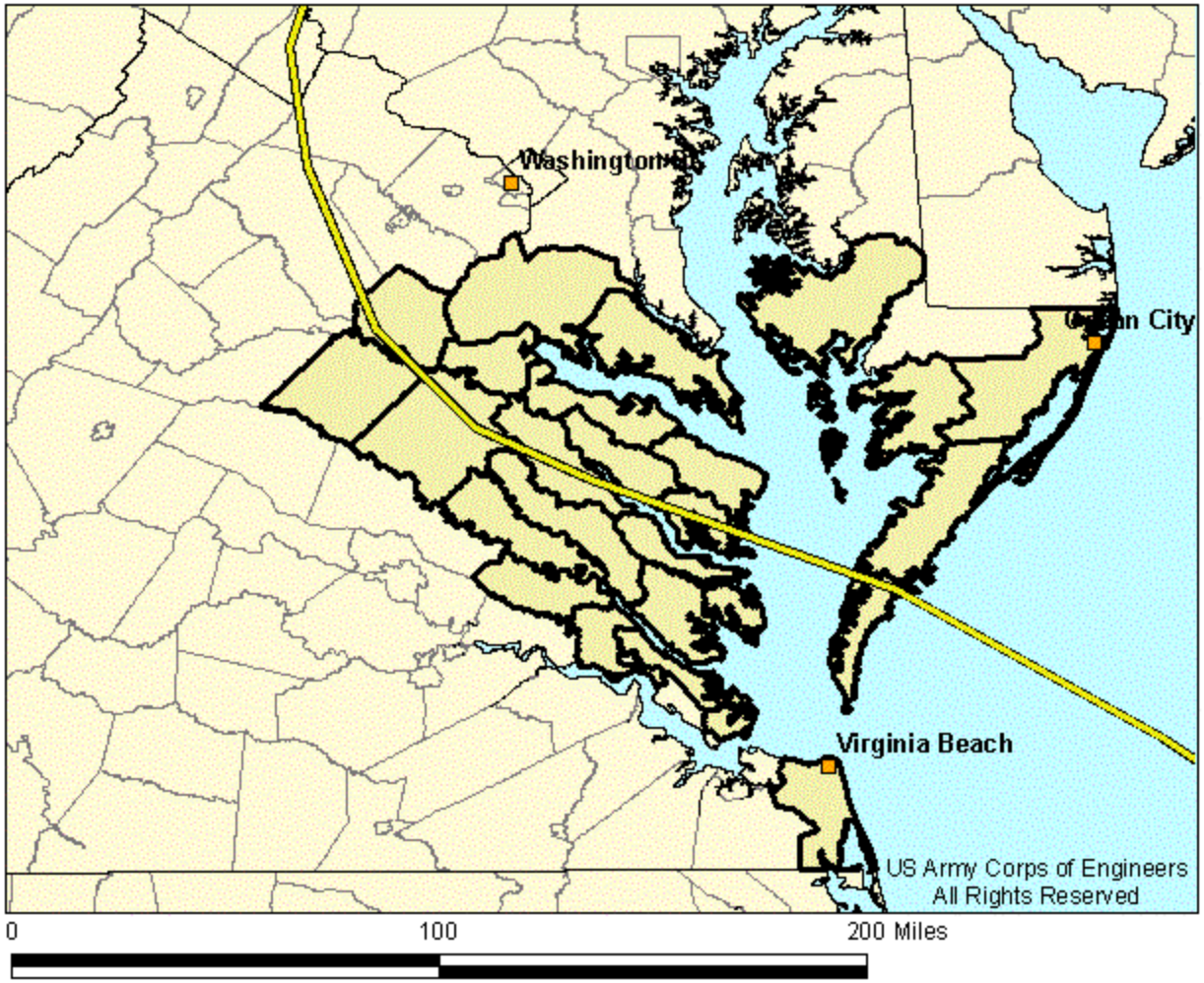
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Dean 1983 Temporary Roofing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

Virginia - 6,900
Maryland - 800

Model results per County on following page

This model is based on a Category 2 storm making landfall near Exmore, VA.

Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 2 storm making landfall near Exmore, VA. These projections are based on information from the NHC (1330 EDT 05/14/2008) forecast. Temporary roofing is based on 3% in CAT 1 and 6% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane dean 1983 Roofing Model

Generated By:
Siemsen, LRL 1400 EDT 05/14/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Dean 1983 Temporary Roofing Model

For Planning Purposes Only!

Landfall Plus About 12 Hours

State	House Units per State	County	House Units per County
Maryland		Charles	< 100
		Dorchester	< 100
		Somerset	200
		St Mary's	600
		Worcester	< 100
Maryland	800		
Virginia		Accomack	800
		Caroline	200
		Essex	200
		Fredericksburg city	300
		Gloucester	500
		Hampton City	200
		James City	< 100
		King And Queen	< 100
		King George	300
		King William	200
		Lancaster	300
		Mathews	200
		Middlesex	300
		New Kent	< 100
		Northampton	400
		Northumberland	400
		Poquoson City	200
		Richmond	200
		Spotsylvania	700
		Stafford	900
		Virginia Beach city	< 100
		Westmoreland	300
		York	300
Virginia	6,900		

Temporary roofing is based on 3% in CAT 1 and 6% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane dean 1983 Roofing Model

Generated By:
Siemsen, LRL 1400 EDT 05/14/2008

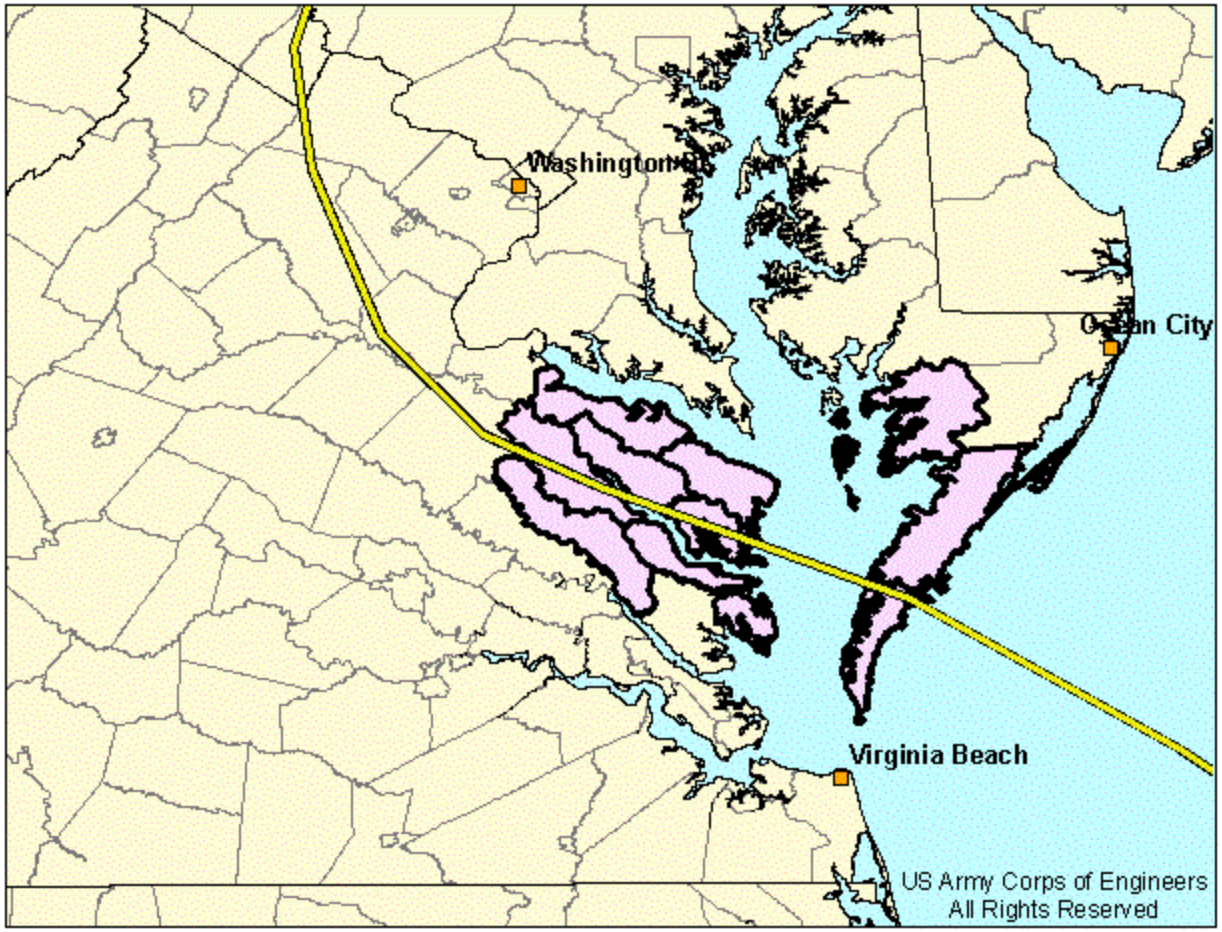
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Dean 1983 Temporary Housing Model

US Army Corps of Engineers

Landfall Plus About 12 Hours

For Planning Purposes Only!



0 100 200 Miles

Post Landfall Temporary Housing Model Results

Model results per County on following page

This model is based on a Category 2 storm making landfall near Exmore, VA.

Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 2 storm making landfall near Exmore, VA. These projections are based on information from the NHC (1330 EDT 05/14/2008) forecast. Temporary housing is based on 1% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane dean 1983 Housing Model	
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Sources: HURREVAC LRL-DEBRIS	Page 7 of 12

US Army Corps of Engineers

Hurricane Dean 1983 Temporary Housing Model

For Planning Purposes Only!

Landfall Plus About 12 Hours

State	House Units per State	County	House Units per County
Maryland		Somerset	< 100
Maryland			
Virginia		Accomack	< 100
		Essex	< 100
		King And Queen	< 100
		Lancaster	< 100
		Mathews	< 100
		Middlesex	< 100
		Northampton	< 100
		Northumberland	< 100
		Richmond	< 100
		Westmoreland	< 100
Virginia			

Temporary housing is based on 1% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane dean 1983 Housing Model

Generated By:
Siemsen, LRL 1400 EDT 05/14/2008

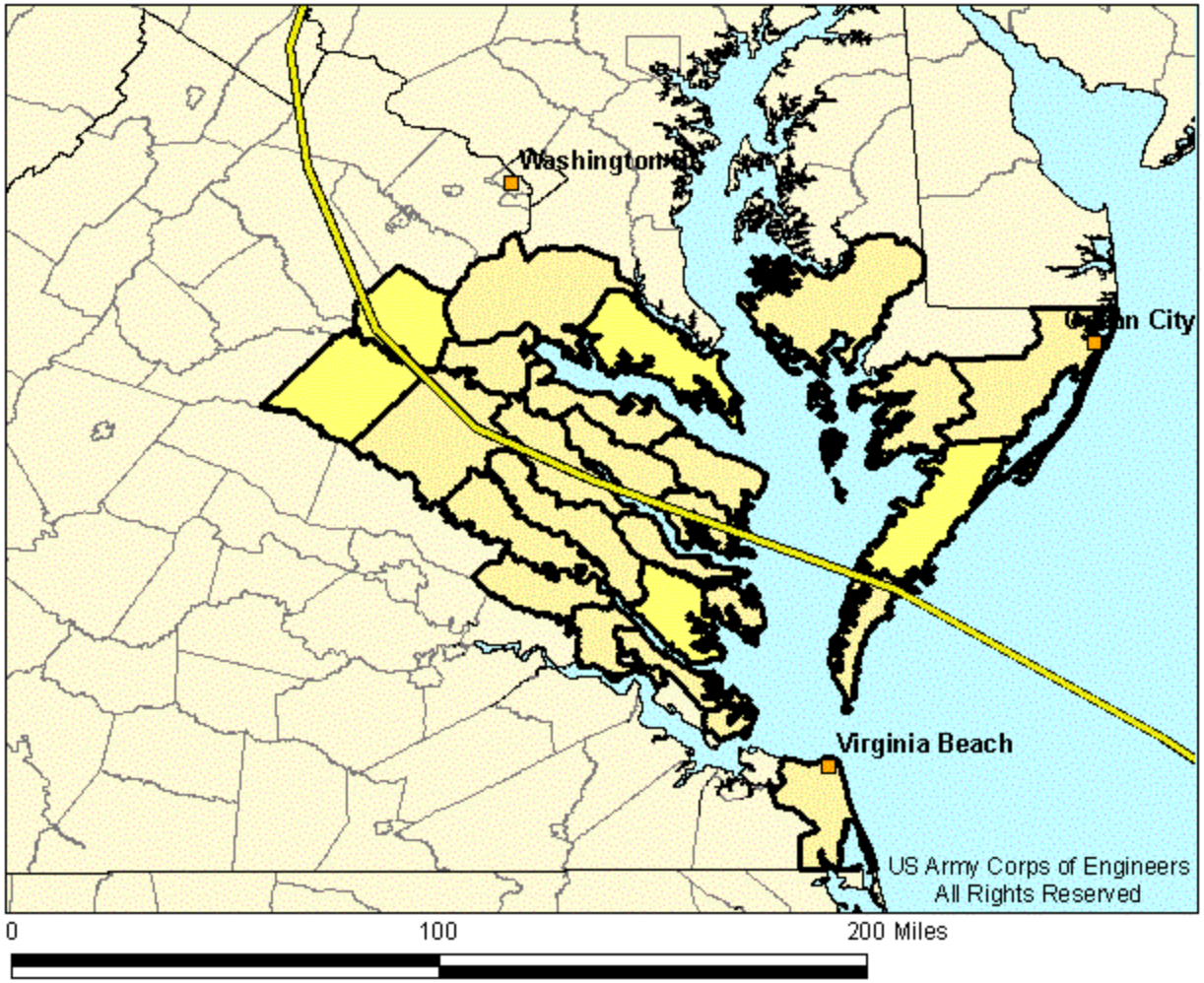
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Dean 1983 Population Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Population Model Results

Virginia - 453,000
Maryland - 86,000

Model results per County on following page

This model is based on a Category 2 storm making landfall near Exmore, VA.

Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 2 storm making landfall near Exmore, VA. These projections are based on information from the NHC (1330 EDT 05/14/2008) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane dean 1983 Population Model	
Generated By: Siemsen, LRL 1400 EDT 05/14/2008	
Sources: HURREVAC LRL-DEBRIS	Page 9 of 12

US Army Corps of Engineers

Hurricane Dean 1983 Population Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
Maryland		Charles	6,000
		Dorchester	< 1,000
		Somerset	18,000
		St Mary's	54,000
		Worcester	8,000
Maryland	86,000		
Virginia		Accomack	40,000
		Caroline	15,000
		Essex	11,000
		Fredericksburg city	22,000
		Gloucester	39,000
		Hampton City	21,000
		James City	< 1,000
		King And Queen	7,000
		King George	22,000
		King William	10,000
		Lancaster	12,000
		Mathews	10,000
		Middlesex	11,000
		New Kent	< 1,000
		Northampton	14,000
		Northumberland	13,000
		Poquoson City	12,000
		Richmond	10,000
		Spotsylvania	62,000
		Stafford	83,000
		Virginia Beach city	< 1,000
		Westmoreland	18,000
		York	21,000
Virginia	453,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane dean 1983 Population Model

Generated By:
Siemsen, LRL 1400 EDT 05/14/2008

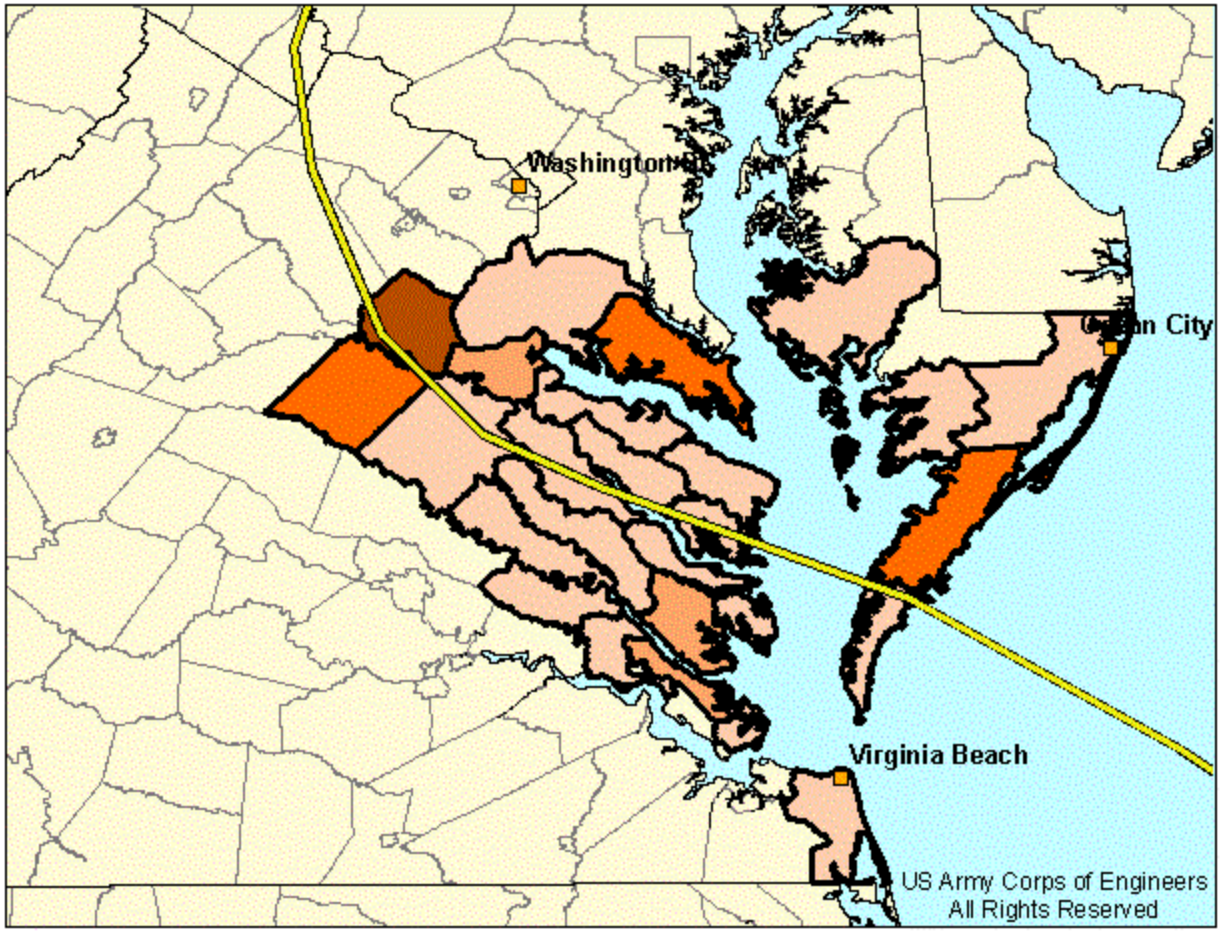
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Dean 1983 Households Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



0 100 200 Miles

Post Landfall Households Model Results

Virginia - 175,000
Maryland - 32,000

Model results per County on following page

This model is based on a Category 2 storm making landfall near Exmore, VA.

Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 2 storm making landfall near Exmore, VA. These projections are based on information from the NHC (1330 EDT 05/14/2008) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane dean 1983 Households Model	
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Sources: HURREVAC LRL-DEBRIS	Page 11 of 12

US Army Corps of Engineers

Hurricane Dean 1983 Households Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
Maryland		Charles	3,000
		Dorchester	< 1,000
		Somerset	6,000
		St Mary's	20,000
		Worcester	3,000
Maryland	32,000		
Virginia		Accomack	16,000
		Caroline	6,000
		Essex	5,000
		Fredericksburg city	9,000
		Gloucester	15,000
		Hampton City	7,000
		James City	< 1,000
		King And Queen	3,000
		King George	8,000
		King William	4,000
		Lancaster	5,000
		Mathews	4,000
		Middlesex	5,000
		New Kent	< 1,000
		Northampton	6,000
		Northumberland	6,000
		Poquoson City	5,000
		Richmond	4,000
		Spotsylvania	23,000
		Stafford	28,000
		Virginia Beach city	< 1,000
		Westmoreland	8,000
		York	8,000
Virginia	175,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

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Hurricane dean 1983 Households Model

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